

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------|
| Applicant's or agent's file reference 712221 | FOR FURTHER ACTION See Form PCT/IPEA/416 | |
| International application No. PCT/AU2004/000068 | International filing date (day/month/year) 20 January 2004 | Priority date (day/month/year) 24 January 2003 |
| International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ C21B 11/08, 13/10 | | |
| Applicant AUSMELT LIMITED et al | | |

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

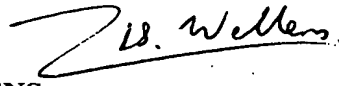
☐ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Date of submission of the demand 13 August 2004 | Date of completion of the report 8 June 2005 |
| Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929 | Authorized Officer  MR KIM WELLENS Telephone No. (02) 6283 2162 |

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1 (b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☐ the description:
- | | | |
|--------|-------------------------------|--------------------|
| pages | as originally filed/furnished | |
| pages* | received by this Authority on | with the letter of |
| pages* | received by this Authority on | with the letter of |
- ☐ the claims:
- | | | |
|--------|-----------------------------------------------------------|--------------------|
| pages | as originally filed/furnished | |
| pages* | as amended (together with any statement) under Article 19 | |
| pages* | received by this Authority on | with the letter of |
| pages* | received by this Authority on | with the letter of |
- ☐ the drawings:
- | | | |
|--------|-------------------------------|--------------------|
| pages | as originally filed/furnished | |
| pages* | received by this Authority on | with the letter of |
| pages* | received by this Authority on | with the letter of |
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to the sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|--------------|-----|
| Novelty (N) | Claims - | YES |
| | Claims 1- 21 | NO |
| Inventive step (IS) | Claims - | YES |
| | Claims 1- 21 | NO |
| Industrial applicability (IA) | Claims 1- 21 | YES |
| | Claims - | NO |

2. Citations and explanations (Rule 70.7)

D1- WO 2001/064960 A1 (Technological Resources Pty Ltd), 7 September 2001

D2- WO 2002/024963 A1 (Technological Resources Pty Ltd), 28 March 2002

D3- EP 1067201 A2 (Technological Resources Pty Ltd), 10 January 2001

D4- US 5498277 A (Floyd et al.), 12 March 1996

Novelty (N) and Inventive Step (IS) claims 1- 21.

The claimed invention relates to the production of iron from its oxide by using, a direct reduction process using a top- submerged lancing reactor, with the off gases being post- combusted. The operation involves controlling the injecting of an oxygen containing gas of at least 40% v/v O₂ through a lance such that in excess of 60% of the fuel/ reductant is combusted. Documents D1- D3 all disclose such operations where the majority of the fuel/ reductant is combusted. Furthermore documents D1 and D2 also disclose a high level of post combustion as defined in claims 7 and 8. Consequently claims 1- 21 are not novel and do not involve an inventive step.

Industrial Applicability (IA) claims 1- 21

The industrial applicability of claimed invention is self-evident.